

# Recombinant Human GCLC

**Cat. No.** GCLC-28158TH    **Lot. No.** (See product label)

## SPECIFICATION

<b>Product Overview</b>	Recombinant fragment corresponding to amino acids 528-637 of Human GCLC with a proprietary tag; Predicted MWt 37.73.
<b>Species</b>	Human
<b>Source</b>	Wheat Germ
<b>ProteinLength</b>	110 amino acids
<b>Description</b>	Glutamate-cysteine ligase, also known as gamma-glutamylcysteine synthetase is the first rate-limiting enzyme of glutathione synthesis. The enzyme consists of two subunits, a heavy catalytic subunit and a light regulatory subunit. This locus encodes the catalytic subunit, while the regulatory subunit is derived from a different gene located on chromosome 1p22-p21. Mutations at this locus have been associated with hemolytic anemia due to deficiency of gamma-glutamylcysteine synthetase and susceptibility to myocardial infarction.
<b>Molecular Weight</b>	37.730kDa inclusive of tags
<b>Biological activity</b>	useful for Antibody Production and Protein Array
<b>Form</b>	Liquid
<b>Purity</b>	Proprietary Purification

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<b>Storage buffer</b>	pH: 8.00 Constituents: 0.79% Tris HCl, 0.31% Glutathione Note: Glutathione is reduced
<b>Storage</b>	Shipped on dry ice. Upon delivery aliquot and store at -80oC. Avoid freeze / thaw cycles.
<b>Sequences of amino acids</b>	EGVFPGLIPIILNSYLENMEVDVDTRCSILNYLKLIIKKRASGELMTVARWMREFIANHP DYKQDSVITDEMNYSLILKCNQIANELCEPELLGSAFRKVKYSGSKTDSSN
<b>Sequence Similarities</b>	Belongs to the glutamate--cysteine ligase type 3 family.

## GENE INFORMATION

<b>Gene Name</b>	<a href="#">GCLC</a> glutamate-cysteine ligase, catalytic subunit [ <a href="#">Homo sapiens</a> ]
<b>Official Symbol</b>	<a href="#">GCLC</a>
<b>Synonyms</b>	<a href="#">GCLC</a> ; glutamate-cysteine ligase, catalytic subunit; <a href="#">GLCL</a> , <a href="#">GLCLC</a> ; glutamate--cysteine ligase catalytic subunit; <a href="#">GCS</a> ;
<b>Gene ID</b>	<a href="#">2729</a>
<b>mRNA Refseq</b>	<a href="#">NM_001197115</a>
<b>Protein Refseq</b>	<a href="#">NP_001184044</a>
<b>MIM</b>	<a href="#">606857</a>
<b>Uniprot ID</b>	<a href="#">P48506</a>
<b>Chromosome Location</b>	6p12

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**Pathway**

Biological oxidations, organism-specific biosystem; Glutathione biosynthesis, glutamate => glutathione, organism-specific biosystem; Glutathione biosynthesis, glutamate => glutathione, conserved biosystem;

**Function**

ADP binding; ATP binding; coenzyme binding; glutamate binding; glutamate-cysteine ligase activity;

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